

IN THE CLAIMS

1. (Currently Amended) A logic emulation module comprising:

a plurality of programmable LSIs capable of programming logic;

a plurality of switching LSIs capable of programming connections;

connectors for electrical connection to entities external to the module;

a board on which to mount said plurality of programmable LSIs, said plurality of switching LSIs and said connectors; and

wiring furnished on said board for carrying data during emulation;

wherein said wiring at least includes lines for directly coupling said connectors to said programmable LSIs and lines for linking said connectors to said programmable LSIs by way of said switching LSIs; and

wherein on said logic emulation module, at least a part of logically equivalent functions to an LSI to be developed are mounted on a logic board prepared for logic verification,

wherein one of said plurality of programmable LSIs is directly connected to another of said plurality of programmable LSIs and is coupled to said another of said plurality of programmable LSIs via one of said plurality of switching LSIs.

2-4. (Canceled).

5. (Original) A logic emulation module according to claim 1, wherein said plurality of programmable LSIs and said plurality of switching LSIs are mounted on a face and a back of said board.

6. (Original) A logic emulation module according to claim 5, wherein said LSIs are mounted in opposite fashion on said face and said back of said board, and wherein signal lands shared by said LSIs are positioned in opposite fashion on the two sides of said board, said signal lands being interconnected by use of through-holes.

7. (Original) A logic emulation module according to claim 6, wherein said programmable LSIs are mounted on said face of said board, and said switching LSIs and connectors for connection to a logic board are mounted on said back of said board.

8. (Original) A logic emulation module according to claim 1, wherein said connectors are furnished on a face and a back of said board.

9. (Original) A logic emulation module according to claim 8, wherein, of pins on said connectors, at least those for power supply and ground lines are positioned in opposite fashion on said face and said back of said board and connected by use of through-holes.

10-12. (Canceled).

13. (Currently Amended) A logic module on a board, at least on one side of said board comprising:

a plurality of programmable logic elements;

connectors for exchanging input and output signals to and from said plurality of programmable logic elements; and switching elements for controlling connections between said plurality of programmable logic elements; and terminal lands for supporting an LSI targeted for development and mounted on said board,

wherein said plurality of programmable logic elements are connected either to said connectors or to said switching elements; and

wherein logic data for logic verification are programmed in said plurality of programmable logic elements; and

wherein one of said plurality of programmable logic elements is directly connected to another of said plurality of programmable logic elements and is coupled to said another of said plurality of programmable logic elements via one of said switching elements.

14. (Original) A logic module according to claim 13, wherein said connectors are furnished on a first and a second side of said board at the same edge thereof, and wherein some of oppositely located terminals of said connectors on said

first and said second side of said board transmit the same signal each.

15. (Original) A logic module according to claim 13, wherein said plurality of programmable logic elements are furnished on at least part of a first side of said board;

wherein said switching elements are located on a second side of said board in opposite relation with said plurality of programmable logic elements;

wherein a second board with a predetermined land layout is interposed between said plurality of programmable logic elements or said switching elements on the one hand and said board on the other hand; and

wherein some of terminals provided for said plurality of programmable logic elements and dealing with the same signals as some of terminals provided for said switching elements are connected to the latter terminals by through-holes furnished on said second board.

16. (Currently Amended) A logic board for carrying integrated circuits, comprising:

a plurality of terminal lands for connecting terminals of said integrated circuits to said logic board; and

connectors for connection to a logic module supporting programmable logic elements in which logic of said integrated circuits is programmed as a functional equivalent logic,

wherein said plurality of terminal lands and said connectors are located in peripheral portions of said logic board where said integrated circuits are mounted; and

wherein said terminal lands and terminals of said connectors are linked on a one-to-one basis, and

wherein each of said connectors is stacking type connector.

17-19. (Canceled)

20. (Currently Amended) A logic module comprising:
a plurality of programmable large-scale integrated circuits in which logic may be programmed;

a plurality of switching large-scale integrated circuits in which connections may be programmed;

a board for supporting said programmable large-scale integrated circuits and said switching large-scale integrated circuits;

a connector for transmitting signals of said programmable large-scale integrated circuits;

a terminal band for supporting an LSI targeted for development and mounted on said board;

first wiring for connecting said programmable large-scale integrated circuits to said switching large-scale integrated circuits;

second wiring for interconnecting said programmable large-scale integrated circuits;

third wiring for connecting said programmable large-scale integrated circuits to said connector; and

fourth wiring for connecting said switching large-scale integrated circuits to said connector;

wherein said first through said fourth wiring are used to connect logic signals constituting logic.

21. (Original) A logic module according to claim 20, wherein said connector is made of a first and a second

connector located in opposite relation with each other on said logic board;

wherein oppositely positioned first terminals of said first and said second connector transmit a first control signal connected in parallel to said programmable large-scale integrated circuits and said switching large-scale integrated circuits;

wherein oppositely positioned second terminals of said first and said second connector transmit an input signal of a second control signal connecting said programmable large-scale integrated circuits to said switching large-scale integrated circuits in series; and

wherein oppositely positioned third terminals of said first and said second connector transmit an output signal of said second control signal connecting said programmable large-scale integrated circuits to said switching large-scale integrated circuits in series.

22. (Currently Amended) A multi-chip module comprising:
a plurality of integrated circuits;

connectors for electrical connection to entities external to the module;

a board on which to mount said plurality of integrated circuits and said connectors;

radiation plates attached to four corners of said multi-chip module for covering said integrated circuits;

metal spacers interposed between said radiation plates, said metal spacers being attached to four corners of said multi-chip module with said radiation plates; and

a heat conduction sheet interposed between said integrated circuits and said radiation plates,

wherein said heat conduction sheet elastically conforms to and closely contacts the shapes of said integrated circuits, and

wherein said integrated circuits are mounted on a first and a second side of said board;

wherein said first and said second side of said board are provides with said radiation plates;

wherein one edge of a flexible heat conduction sheet is attached to the radiation plates on said first side of said board; and

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wherein another edge of said flexible heat conduction sheet is attached to the radiation plates on said second side of said board,

wherein the opposite plane of the radiation plates on the first side of said board is capable of providing with an integrated circuit mounted on another board.

23. (Canceled).

REMARKS

Applicants have amended the claims (claims 1, 13, 16, 20 and 22) to overcome the 35 U.S.C. 102(b) rejection based on Huang et al (Huang) and the 35 U.S.C. 103(a) rejection of claims 22 and 23 as based on Francis. Reconsideration of the rejections in view of the foregoing amendments is requested for the following reasons.

Claims 1 and 13 have been amended to include that one of the plurality of programmable LSIs is directly connected to another of the plurality of programmable LSIs, and is also coupled to another of the plurality of programmable LSIs via one of the plurality of switching LSIs. In this way, the plurality of programmable LSIs are interconnected either